M/001/039

STATE ACTION

Mail to:
Grants Coordinator
State Clearinghouse
116 State Capitol
Salt Lake City, Utah 84114
(801) 538-1027

1. Administering State Agency:

Division of Oil, Gas and Mining
1594 West North Temple Suite 1210
PO Box 145801
Salt Lake City, Utah 84114-5801

2. State Application Identifier Numbers:
(assigned by State Clearinghouse)

3. Approximate date project will start:

May 1, 1997

4. Areawide clearinghouse(s) receiving State Action:

John Williams, Executive Director
Five County Association of Governments
P.O. Box 1550
St. George, Utah 84771

5. Type of action: ☐ Lease ☒ Permit ☐ License ☐ Land Acquisition
☐ Land Sale ☐ Land Exchange ☐ Other _____

6. Title of proposed action:

Centurion Mines Corporation, OK Mine, M/001/039, Beaver County, Utah

7. Description:

During Operations: The mining operation will consist of three phases as follows: *Phase I* - construction of a fully lined (57 acre) heap leach pad, a (2 acre) solvent extraction/electro-winning(SX/EW) processing plant, and the re-mining and leaching of 2 million tons of (previously mined) stockpiled copper ore surrounding the old O.K. Pit. The SX/EW process produces a copper sulfate electrolyte which is pumped into electro-winning cells where 99.998% pure copper is electroplated onto stainless steel sheets. The copper ore is leached with a dilute sulfuric acid solution. *Phase II* - strip mining new ore by widening and deepening the existing O.K. pit. Overburden to ore stripping ratio is approximately 1:1. Run of mine ore will be stacked on the heap and leached. *Phase III* - development of the new eastern extension of the ore zone (Mary I pit). This pit will merge into the eastern side of the O.K. pit. All environmental permits will be in place prior to initiation of operations. Reclamation bonding of this operation will occur in phases. Approval of each phase will remain contingent on adequate permitting and bonding for each phase. All process water will be contained in a fully engineered facility and all environmental controls will be in place prior to initiating leaching operations. Approximately 10 million tons of ore and 10 million tons of waste material will be produced. Variances were granted to topsoiling and reseeding requirements for inaccessible and unsafe pit benches. Variances were granted to allow pit highwalls to remain at angles steeper than 45 degrees, and to allow the pits to impound water following mining.

After Operations: The heap will be rinsed with fresh water rinsate to comply with final effluent standards set by the State Division of Water Quality. Solution in ponds will be allowed to evaporate. Remaining sludge will be tested for metals and subjected to meteoric mobility analyses. All remaining hazardous material from these ponds will be disposed of at an appropriately licensed facility. Pond liners will be folded or dozed into the pond bottoms and covered with 5-10 feet of fill. All dump slopes and heap leach pad slopes will be graded to 3H:1V, and covered with one foot of topsoil and re-vegetated. Monitoring wells will be plugged according to state requirements. A water well will remain to provide a long-term source of water for local wildlife. The processing facilities will be demolished and removed or buried onsite. Exposed concrete foundations will be broken up and buried. The process facilities area will be graded to blend with the adjacent topography and re-vegetated. All non-hazardous or non-toxic materials will be buried. Any remaining hazardous or toxic materials will be disposed of according to federal and state regulations. Approximately one foot of topsoil will be replaced on all disturbed, non-pit areas that originally had topsoil. These areas will be roughened, terraced and reseeded with the approved seedmix to allow postmining use by livestock and wildlife.

8. Land affected (site location map required) (indicate county)

South half of Section 6 and North half of Section 7, Township 27 South, Range 11 West, SLB&M, Beaver County, Utah

9. Has the local government(s) been contacted? To be copied with this notice.	
10. Possible significant impacts likely to occur: None	
11. Name and phone number of district representative from your agency near project site, if applicable: N/A	
12. For further information, contact: D. Wayne Hedberg, Permit Supervisor	**13. Signature and title of authorized officer:** D. Wayne Hedberg Permit Supervisor
Phone: (801) 538-5286	**Date:** 3/21/97

M001039.rdc

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor

Ted Stewart
Executive Director

James W. Carter
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340
801-359-3940 (Fax)
801-538-5319 (TDD)

December 6, 1996

Rick Havenstrite
Dotson Exploration
331 South Rio Grande Street Suite 201
Salt Lake City, Utah 84101

Re: Initial Plan Review, O.K. Mine, Dotson Exploration, O.K. Mine, M/001/039, Beaver County, Utah

Dear Mr. Havenstrite:

The Division has completed a review of your Notice of Intention to Commence Large Mining Operations for the O.K. Copper Mine, located in Beaver County, Utah, which was received August 23, 1996. After reviewing the information, the Division has enclosed comments which will need to be addressed before tentative approval may be granted. The comments are listed under the applicable Minerals Rule heading. Please format your response in a similar fashion.

The Division will suspend further review of the O.K. Mine application until your response to this letter is received. If you have any questions in this regard please contact me, Tony Gallegos, Lynn Kunzler, or Tom Munson of the Minerals Staff. If you wish to arrange a meeting to sit down and discuss this review, please contact us at your earliest convenience. Thank you for your cooperation in completing this permitting action.

Sincerely,

D. Wayne Hedberg
Permit Supervisor
Minerals Regulatory Program

jb
Attachment: Initial Plan Review
cc: Dennis Frederick, DWQ w/attachment
M001039.rev

Initial Plan Review
Dotson Exploration
O.K. Mine - M/001/039
December 6, 1996

R647-4-105 - Maps, Drawings & Photographs

105.1 Topographic base map, boundaries, pre-act disturbance
Please provide a topographic base map which includes borders indicating property ownership within and adjacent to the project area. This same base map should include items listed under sections 1.12, 1.13 and 1.14 under this rule heading. In particular, please include existing disturbances within and adjacent to the project area on this base map. Drawing "OK Mine Plan" may already show existing disturbances, if so, please clarify this and include borders around existing disturbances. (AAG)

105.2 Surface facilities map
Please provide a revised version of the drawing labeled "OK Mine Plan" which includes a border outlining the proposed disturbed area for this project. (AAG)

105.3 Other Drawings or Cross Sections (slopes, roads, pads, etc.)
Please provide typical cross sectional drawings of the pit after final reclamation. Two cross sections running north-south through the eastern lobe of the pit, and one cross section running east-west through the southern lobe of the pit are preferred. (AAG)

Please provide a Reclamation Treatments Map covering the area to be disturbed by this project. The drawings labeled "Reclamation Plan at the End of Mining" and "Final Reclamation (phase 1, 2, & 3)" do provide some of the information which would be included in a Reclamation Treatments Map. The Reclamation Treatments Map would include borders defining the various categories of mining disturbances such as roads, pits, dump tops, dump slopes, leach pad tops and slopes, etc. The areas included within these borders would be cross hatched or color coded to represent the different reclamation treatments each area would receive. Acreages for these various categories would be listed in a summary table. The acreages measured off this map would correspond to acreages used in calculating the reclamation surety estimate. (AAG)

R647-4-106 - Operation Plan

106.2 Type of operations conducted, mining method, processing etc.
Please provide additional information describing the actual mining (extraction) process. This description would include the typical mining sequence such as drilling, blasting, waste haulage, method of waste placement, ore haulage, crushing circuit, etc. Please describe the typical equipment to be used, blasting agents, size of blast rounds, crushing systems, etc. (AAG)

106.3 Estimated acreages disturbed, reclaimed, annually.
What is the total disturbed acreage for this project (including areas of existing disturbance which will be reimpacted)? What is the amount of area to be disturbed by this project which is not proposed to be reclaimed? Please provide an acreage breakdown of the total disturbed area using the same categories as on the reclamation treatments map. (AAG)

The "Summary of Reclamation Costs" on page 10.8 of the submission lists the total acreage as 176.58. Adding up the three phases listed on the drawing titled "Reclamation Plan at the End of Mining" gives a total acreage of 275.39, page 1.8; Technical Project Summary says 300 acres! Please explain what these different figures represent. (AAG)

106.4 Nature of materials mined, waste and estimated tonnages
Please provide estimates of the amount of ore mined and waste/overburden produced annually. Please describe the physical characteristics of the run of mine ore and waste material such as mineral forms, particle sizes, and percentage of particle sizes. (AAG)

106.6 Plan for protecting & redepositing soils
The Notice indicates that topsoil will be salvaged, stockpiled and seeded. Please provide a seed mix that will be used for topsoil stockpile protection. Also, the topsoil pile should be signed so that it is not accidentally used or impacted during operations. (LK)

106.9 Location & size of ore & waste stockpiles, tailings, ponds
Please provide an estimate of the volume of ore to be stockpiled and include the stockpile location and size on the appropriate drawing. Please provide an estimate of the volume of waste rock to be placed at each of the proposed waste dump locations. (AAG)

R647-4-107 - Operation Practices

107.1.12 Disposal of trash, scrap, debris
Please describe how trash, scrap and debris generated during active mining operations will be handled. (AAG)

107.1.14 Posting warning signs
Please describe the locations of warning signs which will be posted during operations

to prevent public access to mine hazards. (AAG)

107.1.15 Constructing berms, fences, etc. above highwalls
Please describe any proposed berms or fencing to prevent public access above highwalls during active mining operations. Please show the proposed locations for these features on the appropriate drawing(s). (AAG)

R647-4-109 - Impact Assessment

109.1 Impacts to surface & groundwater systems
The Department of Environmental Quality, Division of Water Quality has supplied us with a copy of their August 22, 1996, letter to Mr. Havenstrite regarding groundwater and surface water concerns. Please supply us with a finalized copy of the review comments supplied to the Division of Water Quality as requested in their August 22, 1996 letter. This would avoid duplication of reviews and should satisfy the Division's requirements regrading this information. (TM)

109.4 Slope stability, erosion control, air quality, safety
Page 10.4 of the submission states current pit walls are stable at approximately 60 degrees and have been for 25 years. This section describes the proposed pit highwalls as being at 50-55 degrees. Please provide additional information describing the safety and stability of the proposed pit highwalls. This additional information may include: correlation between the geologic units comprising the existing pit walls and the proposed highwalls, a description of the actual geologic structures in the proposed highwall as discovered through drilling, drawings identifying the location(s) of the existing highwalls and the location(s) of the proposed highwalls, and other information which supports the assertion that the proposed configuration will be stable. (AAG)

R647-4-110 - Reclamation Plan

110.1 Concurrent & post mining land use
The Notice identifies the post mining land use as future mining of the pit only? See page 1.3 of the plan. This section should be revised to include wildlife habitat, recreation and grazing. (LK)

110.2 Roads, highwalls, slopes, drainages, pits, etc., reclaimed
Section 10.2 of the submission states that main haul roads will be reclaimed from their average 60 foot width to a driving width of 15 feet. This reclamation appears to

be directed towards returning haul roads to pre-existing road widths. Please confirm or clarify this. Please note that new roads which are proposed to be retained after final reclamation will need to be included in a variance request. The Division's recommended reclamation treatments for roads is regrading, ripping, topsoiling and seeding. In some cases, regrading and topsoiling is unnecessary. Please clarify which roads will be reclaimed and which roads are proposed to remain by providing a written description and also identifying these roads on the reclamation treatments map requested under section R647-4-105.3.18. (AAG)

Page 10.4 of the submission proposes leaving pit highwalls unrevegetated. It is unclear if this statement was meant to apply to all features within the pit such as pit access roads or the pit bottom. The Division normally requires some reclamation of both the pit bottom and the road(s) accessing the pit bottom. Please describe the reclamation proposed for the pit access road and pit bottom or include these features in the appropriate variance request. (AAG)

110.3 Description of facilities to be left (post mining use)
Page 10.2 under the heading Road Reclamation infers that haul roads will remain after being reclaimed to a 15 foot width. The clarification requested above will address this inferred post mine use of the haul roads. No other structures or facilities were described in this submission as remaining after final reclamation. Please confirm this. (AAG)

110.5 Revegetation planting program
Apparently, the plan does not include revegetation of pit benches and the floor. Please note, the Division will require revegetation of all areas with the exception of highwalls and areas of solid rock outcrop. Please revise your plan accordingly, see R647-4-112 - Variances. (LK)

R647-4-111 - Reclamation Practices

111.1.12 Disposal of trash & debris
The submission proposes onsite burial of non-hazardous, non-toxic materials at final reclamation. These materials would include scrap lumber, scrap metal, and broken up concrete. Please describe the proposed location(s) for burial of these materials. The Division will require a minimum of four feet of cover material over inert materials which are buried onsite at final reclamation. (AAG)

111.1.15 Constructing berms/fences above highwalls

Please describe the berms or fencing to remain in place after final reclamation which will prevent public access to pit highwalls. (AAG)

111.2 Reclamation of natural channels
The Reclamation plan and operational plan show a diversion of surface water north of the Heap Leach pad and west of the Heap Leach Pad running to the southwest. Are these natural existing drainages or constructed diversions? If they are constructed diversions please provide the design detail (sizing, erosion protection, etc.). (TM)

Page 10.1 section Heap Leach Pad Reclamation, proposes evaporating water remaining in the ponds, disposing of sludges based on toxicity, rinsing pond liners, folding liners and placing them in the pond bottoms and covering them with 5-10 feet of fill dozed from the slopes of the heap. The solution ponds may need to remain intact for several years after the heap is reclaimed to collect and treat residual leachate coming from the heap. Reclamation of these ponds as proposed would be acceptable to the Division after the leachate coming from the heap has reached acceptable compliance levels. (AAG)

111.3 Erosion & sediment control
Erosion and sediment control is important in terms of protecting regraded and topsoiled heap leach pads and waste dumps to prevent undue gulling and loss of topsoil. Please describe in more detail how the intermittent breaks in slope will be incorporated into the final designs to prevent erosion and loss of topsoil. (TM)

111.5 Land capable of post mining land use
See comments under R647.110.1. (LK)

111.6 All slopes regraded to stable configuration
Page 10.1 section Re-grading, states that all dump slopes will be regraded to a slope of 3H:1V. This section later states that end dump slopes will be 1H:1V at the cessation of mining and heap slopes will be 2.5H:1V at the end of pad building. The Division interprets the proposal as dump slopes and heap slopes will be regraded to 3H:1V at final reclamation. Please confirm or clarify this. Please be advised it is unlikely that the Division of Water Quality will allow heap leach materials to be regraded off the liner system. (AAG)

111.7 Highwalls stabilized at 45 degrees or less
Comments regarding highwall angles are presented under R647-4-112 Variance. (AAG)

111.8 All roads & pads reclaimed
Comments regarding road reclamation are presented under R647-4-110. (AAG)

111.9 Dams & impoundments left self draining & stable
The application shows that Centurion will incorporate a stormwater catchment east of the reclaimed heap leach pad. Please provide enough detail to demonstrate that it will be stable and self draining following bond release. Centurion may continue to use it as a permanent (?) sediment control structure as long as it is stable and is not allowed to breach on its own. Please discuss the intent and design of this structure in more detail. (TM)

R647-4-112 - Variance

The applicant has requested variances for item numbers 7 (highwalls), 12 (topsoil redistribution on pit walls) and 13 (revegetation of pit walls). The plan indicates that pit walls will be left at approximately 55 degrees and will be of solid rock. The Division concurs that a variance is warranted for topsoiling and revegetating these areas. However, if there are pit benches that are accessable, they should be topsoiled and seeded as well as the pit floor. LK

The additional information requested under sections R647-4-105.3 (pit cross sections) and R647-4-109.4 (highwall stability) will need to be reviewed before the Division will consider granting a variance to rule R647-4-111.7 Highwalls. (AAG)

R647-4-113 - Surety

The Division will not be able to verify the proposed amount of reclamation surety for this project until the additional information requested in this review letter has been received and reviewed. Comments regarding the surety calculation included in the submission are listed below.

The wages for the bulldozer operator and scraper operator listed in Table 10.A.1 on page 10.9 of the submission are less than one half the wages for comparable operators listed in the Means Heavy Construction Cost Data 1996. Adjusting the wages in this Means guide for the Salt Lake City Cost index gives a wage of $32.22/hr and $32.55/hr for a dozer operator and scraper operator, respectively. Please provide a copy of the pertinent sections of the U.S. Dept. Of Labor General Wage Decision referenced in section 10.A to support the wages used in the surety estimate or use the hourly wages listed above.

The mobilization/demobilization costs used in Table 10.C.1 for a D9N bulldozer and 631 Scraper are low compared to the amounts listed in the Means 1996 guide mentioned above. The Means guide lists mobilization and demobilization up to 25 miles as $297 and $375 for a 300 hp dozer and 24 CY scraper, respectively. For remote sites, the Division typically estimates a combined mob/demob cost for large pieces of equipment at $1,000 each. Please adjust your mobilization table using the Means costs.

The production rates used in Table E10.D.1 on page 10.12 for regrading the berm and pond are high. These values appear to have been estimated by projecting the Cat production curve inward towards the x-axis for push distances which are less than the beginning curve value. Please replace these two production rates with a more conservative maximum of 2,000 (LCY/hr) and recalculate the line amounts.

Was ripping road beds with a dozer included in the "Regrading" line item? If not, please include a new line item of ripping roads and other compacted surfaces such as ore pads or parking areas and insert the appropriate acreage and unit cost.

The reclamation surety estimate will need to be adjusted to include a 10% contingency and five years of escalation. The contingency would be added to the total in current year dollars. The new total which included the contingency would then be escalated five years into the future using the projected annual escalation factor of 2.58%. The escalation would be calculated using the formula of $FV = PV\ (1+I)^n$. Where "FV" is the future value, "PV" is the present value, "I" is the annual escalation factor in decimal form, and "n" is the escalation period in years. Please include the 10% contingency and five year escalation in the revised reclamation surety estimate.

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340
801-359-3940 (Fax)
801-538-5319 (TDD)

June 4, 1996

Rick Havenstrite, P.E.
Centurion Mines Corporation
331 South Rio Grande Street, Suite 208
Salt Lake City, Utah 84108

Re: Notice of Intention to Commence Small Mining Operations, OK Mine, S/001/039, Beaver County, Utah

Dear Mr. Havenstrite:

Thank you for your Notice of Intention to Commence Small Mining Operations, received by the Division on June 3, 1996. The application for the proposed OK Mine, located in Section 7, T27N, R11W, SLBM, Beaver County, Utah is complete and no additional information is required at this time regarding the small mining portion of this operation. Please keep in mind that approval of a large mining operation (LMO) could possibly take up to six months to a year or longer. Please plan accordingly for the submittal of the LMO so that you don't exceed the five acre limitation of this permit.

For your reference, I have enclosed copies of our summarized rules regarding "Operation and Reclamation Practices", and the statutory penalty for failure to reclaim a minesite (SMO-1). Please give special consideration to item #10 of the "Operation and Reclamation Practices. Stockpiling topsoil material prior to beginning your mining operation will help ensure successful revegetation efforts upon final reclamation of the minesite. If the area being mined is a solid rock outcrop, or if the land surface is very rocky, then soil stockpiling is probably not possible. However, even the first few inches of undeveloped material is worth saving to aid in later revegetation efforts, and future regulatory release from reclamation requirements.

Should you wish to expand your operation beyond the five (5) acre limitation, please notify this office as soon as possible to discuss the necessary permitting requirements.

A Memorandum of Understanding between this Division and the State Department of Environmental Quality (DEQ) requires us to notify them upon receipt of a mining application. If you haven't already done so, you are advised to contact their office prior to starting your small mining operation to determine whether additional permits and/or approvals are required. We will forward a copy of this letter and your notice to the DEQ for their review. Their address and phone number is: Department of Environmental Quality, 288 North 1460 West, Salt Lake City, Utah, 84116, (801) 538-6146.

Form MR-SMO
(Revised 8/94)

This Section for DOGM Use:
Assigned DOGM File No.: S 1001039
DOGM Lead: TM

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
(801) 538-5340
Fax: (801) 359-3940

NOTICE OF INTENTION TO COMMENCE SMALL MINING OPERATIONS

The informational requirements of this form are based on provisions of the Mined Land Reclamation Act, Title 40-8, Utah Code Annotated 1987, and the General Rules as promulgated under the Utah Minerals Regulatory Program.

"Small Mining Operations" means mining operations which disturb five or less surface acres at any given time.

* * * * * * * * *

I. GENERAL INFORMATION (Rule R647-3-104)

1. Name of Mine: OK MINE

2. Name of Operator/Applicant: DOTSON EXPLORATION WHOLLY OWNED BY CENTURION MINES CORP.
Company ( ) Corporation (✓) Partnership ( ) Individual ( )

3. Permanent Address: 331 So. RIO GRANDE ST. - SUITE 208
City: SALT LAKE CITY State: UT Zip Code: 84108
Telephone Number: (801) 534 - 1120

4. Ownership of Land Surface:

Private (Fee) ☑ Public Domain (BLM) ☐ National Forest (USFS) ☐
State Trust Land/School Sections ☐ State Sovereign Lands ☐
Other (please describe): _____

5. Ownership of Minerals:

Private (Fee) ☑ Public Domain (BLM) ☐ National Forest (USFS) ☐
State Trust Land/School Sections ☐ State Sovereign Lands ☐
Other (please describe): _____

Utah Mining Claim Number(s): _____
_____

Utah State Lease Number(s):_____

Name of Lessee(s)_____

6. Have the above surface and mineral owners been notified in writing?
Yes _____ No _____

If no, why not?_____

Please be advised that if State Trust Lands are involved, notification to the Division of Oil, Gas and Mining alone does not satisfy the notification requirements of Mineral Leases upon State Trust Lands. Exploration or mining activity on State Trust Lands requires a minimum of 60 days notice to the Trust Lands Administration prior to commencing any activities. Please contact the School Institutional Trust Lands Administration (SITLA) at (801) 538-5508 for notification requirements.

7. Does the operator have legal right to enter and conduct mining operations on the land covered by this notice? Yes X No _____

II. PROJECT LOCATION & MAP (Rule R647-3-105)

1. Project Location (legal description):

County(ies): BEAVER COUNTY

SE 1/4, of SE 1/4, of NW 1/4: Section: 7 Township: 27N Range: 11W (OFFICE)
NE 1/4, of NW 1/4, of NE 1/4: Section: 7 Township: 27N Range: 11W (WATER TANK)
_____ 1/4, of _____ 1/4, of _____ 1/4: Section: _____ Township: _____ Range: _____

2. A topographic base map showing the location of the proposed small mining operation must be submitted with this notice. A USGS 7.5 minute series map is preferred. The areas to be disturbed should be plotted in sufficient detail so that they can be located on the ground. It is recommended that the operator also plot and label any pre-existing disturbances in the immediate vicinity that he is not responsible for.

III. OPERATION PLAN (Rule R647-3-106)

1. Type of mining: Surface ☑ Underground ☐ N/A

2. Mineral(s) to be mined:_____

3. Provide a brief description of the proposed mining operation and onsite processing facilities. OFFICE AND WATER SYSTEM FOR PROPOSED LARGE MINING OPERATION

☐ New Road(s): Length 1000 (ft) Width 20 (ft)

☐ Improved Road(s): Length _____ (ft) Width _____ (ft)

Total project surface acreage to be disturbed: 3 ACRES (OR LESS) (acres)

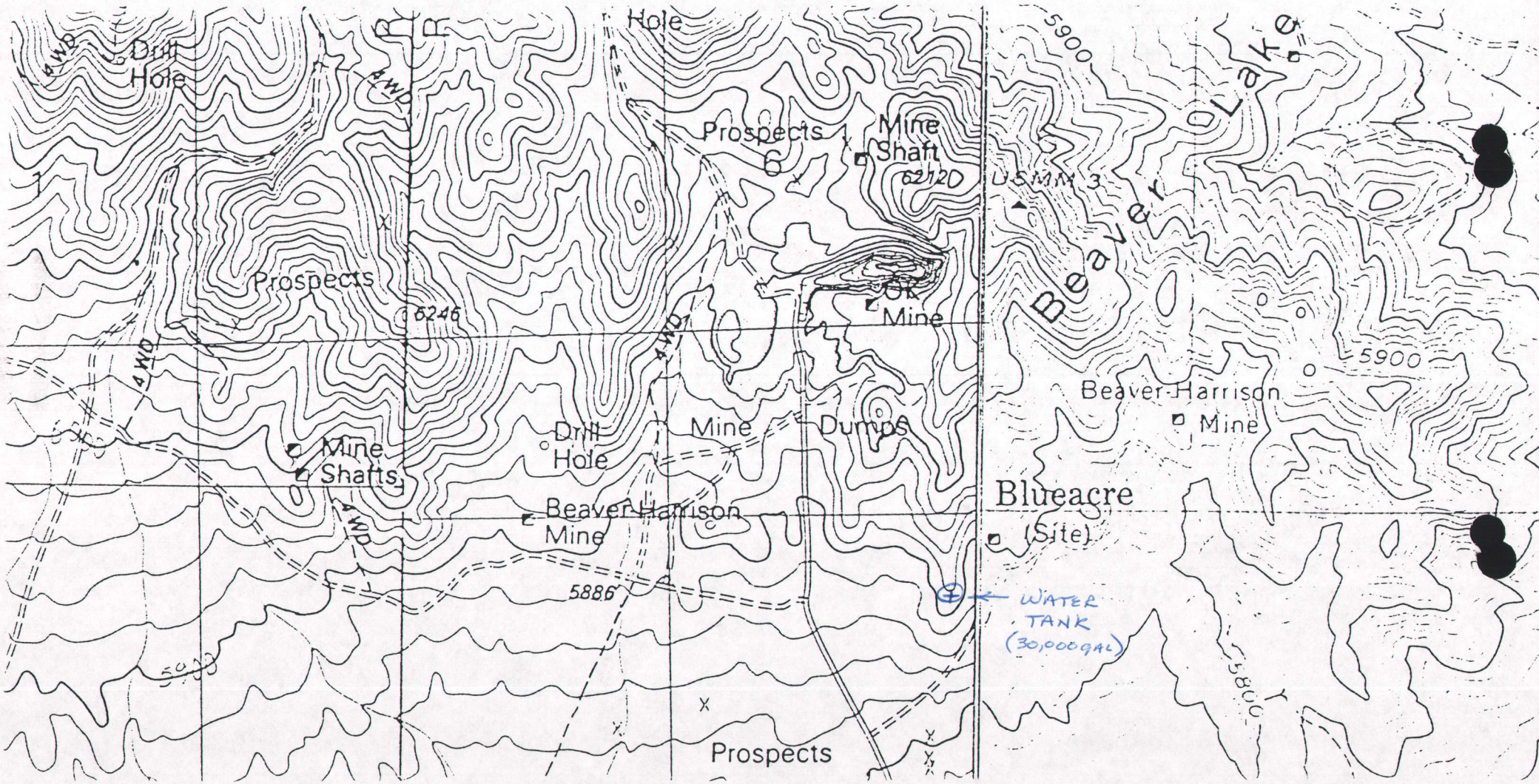
Proposed startup date of project (month, year) 6/15/96

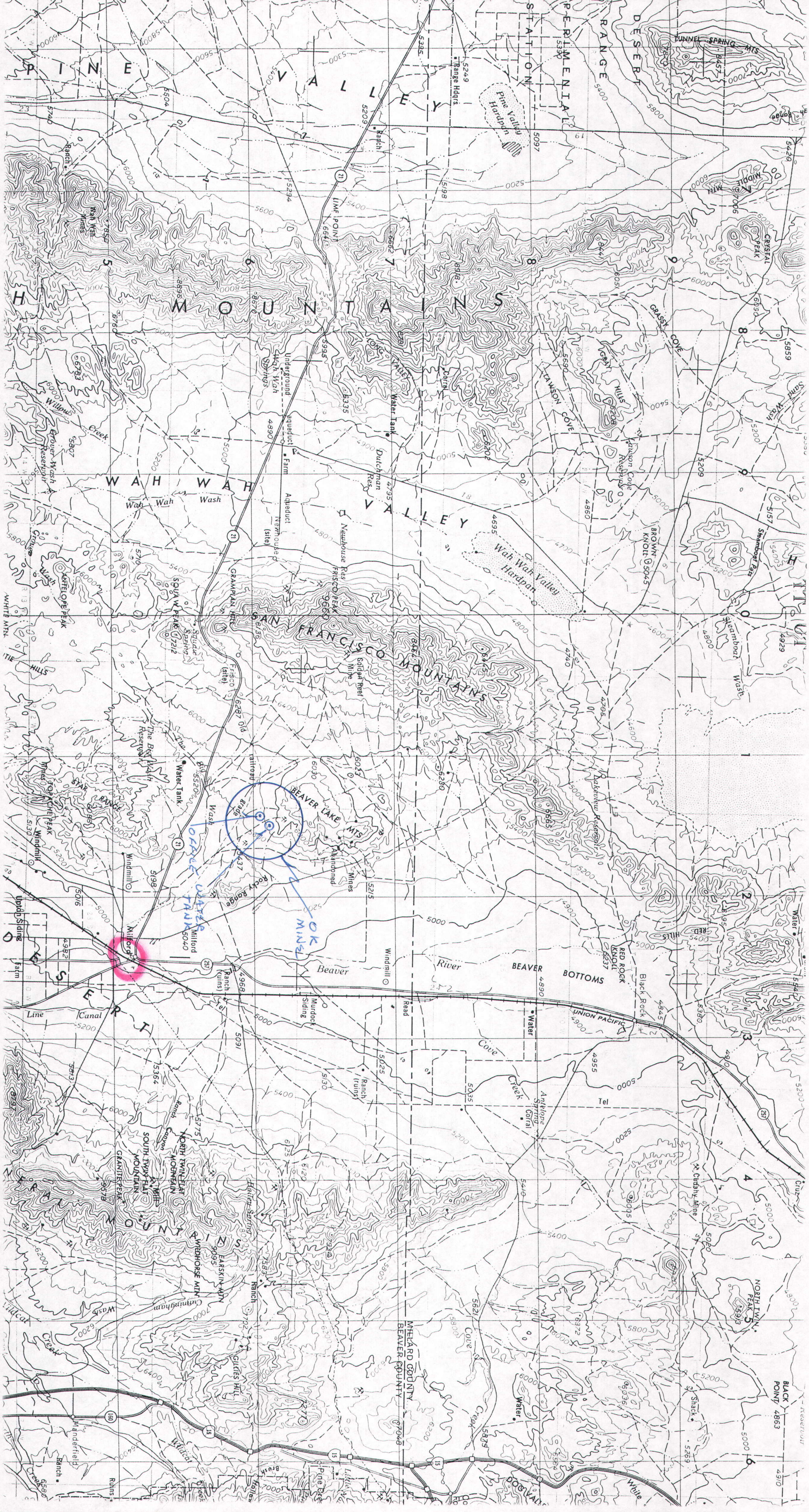
Proposed completion date of project, if known (month, year) 8/15/96

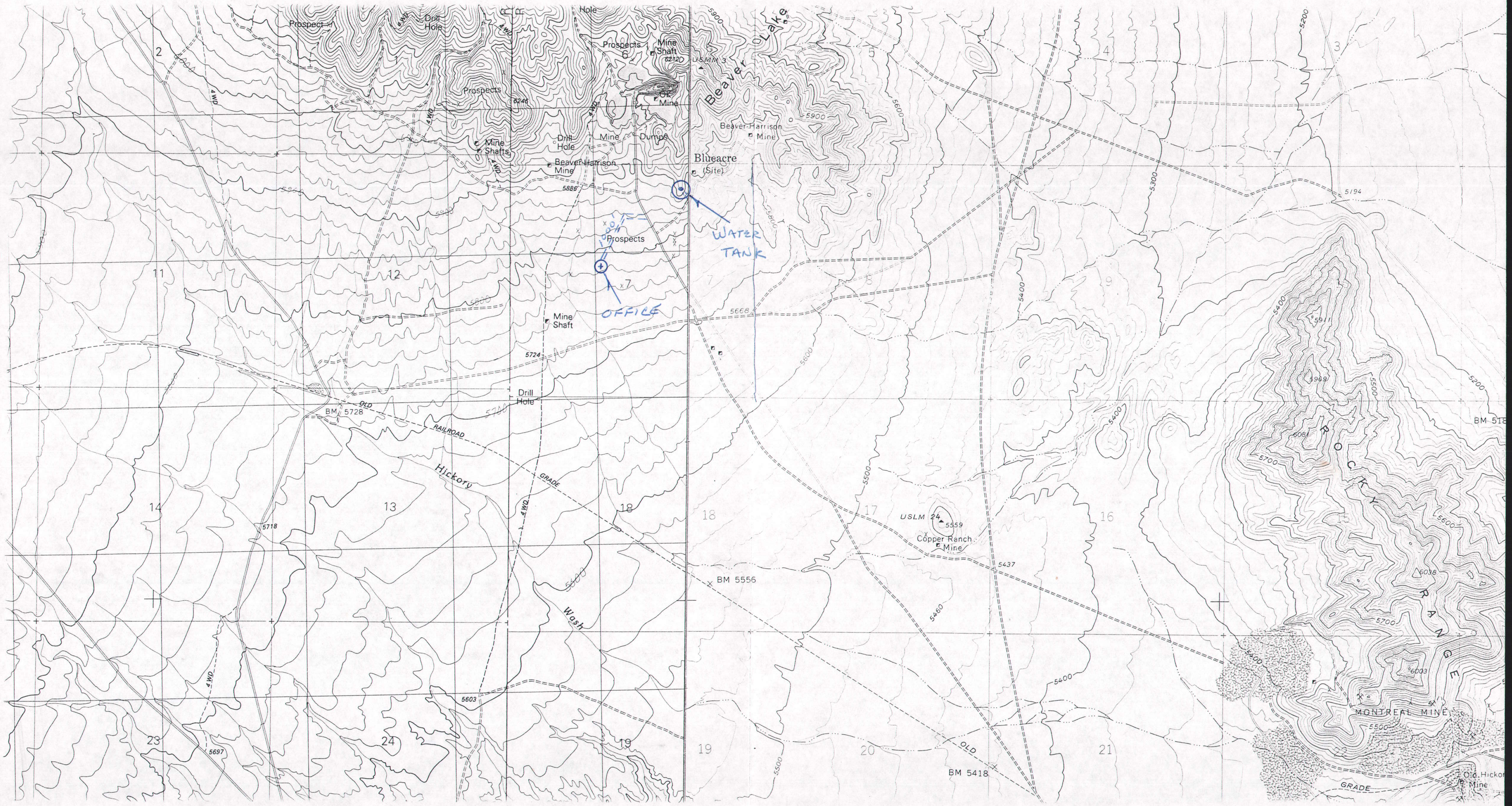
IV. OPERATION AND RECLAMATION PRACTICES (Rule R647-3-107, 108 & 109)

The reclamation and operation obligation is to keep the area clean and safe, minimize hazards to public safety, return the land to a useful condition, and reestablish at least 70 percent of the premining vegetative ground cover. To accomplish this, the operator will need to perform reclamation concurrently, or at the completion (within one (1) year) of mining:

1. Keep the mining operation in a safe, clean, and environmentally stable condition.
2. Permanently seal all shafts and tunnels to prevent unauthorized or accidental entry.
3. Plug drill holes with a five foot cement surface plug. Holes that encounter fluids are to be plugged in the subsurface to prevent aquifer contamination.
4. Construct berms, fences, or barriers, when needed, above highwalls and excavations.
5. Remove, isolate, or neutralize all toxic materials in a manner compatible with federal and state regulations.
6. Remove all waste or debris from stream channels.
7. Dispose of any trash, scrap metal, wood, machinery, and buildings.
8. Conduct mining activities so as to minimize erosion and control sediment.
9. Reclaim all roads that are not part of a permanent transportation system.
10. Stockpile topsoil and suitable overburden prior to mining.
11. Stabilize highwalls by backfilling or rounding to 45 degrees or less, where feasible; reshape the land to near its original contour, and redistribute the topsoil and suitable overburden.
12. Properly prepare seedbed to a depth of six inches by ripping, discing, or harrowing.
13. Reseed disturbed areas with adaptable species. (The Division recommends seeding 20 lbs./acre of native and introduced species of grass, forb, and browse seed, and will provide a specific species list if requested.)
14. Plant the seed with a rangeland or farm drill, or if broadcast seeded, harrow or rake the seed 1/4-1/2 inch into the soil - fall is the preferred time to seed.


Drill Hole
4WD
Prospects
6246
Mine Shafts
Drill Hole
Beaver Harrison Mine
5886
Prospects
Hole
Prospects
Mine Shaft
6210
OK Mine
Mine
Dumps
5900
Beaver Lake
USMM 3
5900
Beaver Harrison Mine
Blueacre
(Site)
WATER TANK (30,000 GAL)
5800
OFFICE (25'x40')


PINE VALLEY
Range Hdqrs.
Pine Valley Hardpan
EXPERIMENTAL RANGE STATION
DESERT
TUNNEL SPRING MTS
MIDDLE MTN
CRYSTAL PEAK
LIME POINT
Ranch
Wah Wah Mines
MOUNTAINS
LONG VALLEY
Corral
GRAY HILLS
LAWSON COVE
GRASSY COVE
Sand Wash
Lawson Cove Reservoir
Underground Aqueduct
Wah Wah Springs
Water Tank
Farm
Aqueduct
Dutchman Res
Willow Creek
Grover Wash Reservoir
WAH WAH VALLEY
Wah Wah Wash
Newhouse (site)
Newhouse Res
Wah Wah Valley Hardpan
BROWN KNOLL
Steamboat Pass
Steamboat Wash
ANTELOPE PEAK
WHITE MTN
SQUAW PEAK
Squaw Spring
GRAMPIAN HILL
FRISCO PEAK
SAN FRANCISCO MOUNTAINS
Golden Reef Mine
Frisco (site)
Old Railroad Grade
The Big Wash Reservoir
Water Tank
STAR RANGE
TOPACHE PEAK
Mines
Windmill
BEAVER LAKE MTS
Abandoned Mines
Rocky Range
Lakeview Reservoir
RED HILLS
Water
Upton Siding
Milford
Beaver River
BEAVER BOTTOMS
RED ROCK KNOLL
Black Rock
UNION PACIFIC
Ranch (ruins)
Murdock Siding
Read
Windmill
Water
DESERT
Line Canal
Cove Creek
Antelope Spring
Corral
Tel
Cudahy Mine
Cruz
NORTH TWIN PEAK
BLACK POINT
Shack
Ranch Canyon
NORTH TWIN FLAT MOUNTAIN
SOUTH TWIN FLAT MOUNTAIN
GRANITE PEAK
MINERAL MOUNTAINS
WILDHORSE MTN
EARSKIN MTN
Bailey Spring
Ranch
Cunningham Wash
Wildcat Creek
GILLIES HILL
MILLARD COUNTY
BEAVER COUNTY
Manderfield
Ranch
Ruins
Pine Creek
Brush Hollow
DOG VALLEY
White
Water
21
257
15
160
OFFICE WATER TANK
OK MINE



Prospect
Drill Hole
Hole
Prospects
Mine Shaft
6212
USMM 3
Beaver Lake
Prospects
6246
OK Mine
Mine Shafts
Drill Hole
Mine
Dumps
Beaver-Harrison Mine
Beaver-Harrison Mine
Blueacre (Site)
5886
WATER TANK
Prospects
OFFICE
Mine Shaft
5724
Drill Hole
5668
BM 5728
OLD RAILROAD GRADE
Hickory Wash
4WD
5718
5603
5697
BM 5556
USLM 24
5559
Copper Ranch Mine
5437
5460
BM 5418
OLD
5194
5900
5800
5600
5500
5400
5300
5200
ROCKY RANGE
MONTREAL MINE
Old Hickory Mine
GRADE
6038
6003
5911
BM 518
2
11
12
13
14
23
24
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18
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16
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21
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3